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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,298	05/25/2001	Horst Muhlfield	22750/476	4312

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EXAMINER

GORR, RACHEL F

ART UNIT	PAPER NUMBER
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1711

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DATE MAILED: 07/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/866,298

Applicant(s)

MUHLFELD ET AL.

Examiner

Rachel Gorr

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-11 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidingsfeld in view of Ulrich, Morikawa, and Woods .

3. Heidingsfeld discloses mixing thermoplastic polyurethanes (TPU) with additional polyisocyanate (component d of the invention)(col. 1, lines 45-50). The thermoplastic polyurethane comprises the a, b and c components of the invention. He shows polyol (a) at the top of col. 2, diisocyanates (b and d) (middle col. 2) and chain extenders (component c of invention) at the top of col. 3, and NCO/OH ratios of 0.95-1.10 (top col. 2). In Table 2, he discloses adding 1-1.5 wt.% additional polyisocyanate. Heidingsfeld differs from the invention by showing both aromatic and aliphatic polyisocyanates. He differs from dependent claim 16 by mixing the polyurethane in an extruder rather than in a tumbling mixer. He differs from dependent claims 17-20 by not disclosing all the same applications.

4. Ulrich shows that aliphatic polyisocyanates make color-stable polyurethanes (see first sentence under Introduction).

5. Morikawa (col. 4, lines 6-14) discloses that polymer compositions can be prepared by extruders or tumbling mixers.

6. Wood discloses that thermoplastic polyurethanes can be used for a large variety of applications.

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose to use aliphatic polyisocyanates in Heidingsfeld's polyurethane because Ulrich shows this as a way of making color-stable polyurethanes. It would have been obvious to use a tumbling mixer because Morikawa shows this mixer equivalent to an extruder for compounding polymer formulations. It would have been obvious to use Heidingsfeld's polyurethane for many applications because Wood shows a variety of applications for thermoplastic polyurethanes.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Murata reference also discloses adding polyisocyanates to thermoplastic polyurethanes.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel Gorr whose telephone number is (703) 308-3608. The examiner can normally be reached on Mon., Tues., Thurs., Fri., from 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


RACHEL GORR
PRIMARY EXAMINER